

What doctors want patients to know about the impact of caffeine

JUL 6, 2026



Sara Berg, MS

News Editor

AT A GLANCE: Caffeine can boost alertness and may fit into a healthy diet for most adults, but physicians say it is important to watch how much you consume, when you have it and how it affects sleep, mood and heart health. Here are five key things you will learn about caffeine from four physicians in this article:

- The FDA considers less than 400 milligrams of caffeine a day safe for most adults, but some people feel jittery or anxious at lower amounts.
- Caffeine can raise blood pressure and heart rate, trigger palpitations, worsen insomnia and interfere with some medications.
- Coffee and tea are linked to health benefits but added sugar and cream can undercut those benefits.
- Energy drinks and caffeine supplements carry higher risks, especially for adolescents and people with heart or anxiety concerns.
- People who are pregnant should limit caffeine to less than 200 milligrams a day, and anyone cutting back should taper slowly to avoid withdrawal.

Many people can't imagine starting their day without a cup of coffee or tea. Caffeine has become the silent hero fueling our daily lives, helping people get through that afternoon slump. It can also have positive effects on alertness, cognitive function and athletic function. But as we indulge in our favorite caffeinated beverages, there are also some concerns about excessive consumption and potential health risks.

[Caffeine](#) is a chemical stimulant that can be found naturally in coffee beans, tea leaves, cacao beans, guarana berries and yerba mate leaves, and quickly boosts alertness and energy levels. It can also be made synthetically and added to drinks, food, tablets and

supplements.

The AMA's What Doctors Want Patients to Know™ series provides physicians with a platform to share what they want patients to understand about today's healthcare headlines.

In this installment, four AMA members shared what doctors wish patients knew about caffeine. They are:

- [Nicole Clark, MD](#), a neurologist in Helena, Montana, and an AMA delegate for the Montana Medical Association.
- [Stephen Devries, MD](#), a preventive cardiologist and executive director of the educational nonprofit [Gaples Institute](#) in Chicago.
- Nerissa Fernandes, DO, an internist at Rush University Medical Center, which is part of Chicago's Rush University System for Health.
- [Shannon Kilgore, MD](#), a neurologist in Palo Alto, California. She is also an AMA delegate for the American Academy of Neurology.

[Rush University System for Health](#) is part of the [AMA Health System Member Program](#), which provides enterprise solutions to equip leadership, physicians and care teams with resources to help drive the future of medicine.

Pay attention to caffeine consumption

About 85% of adults consume 135 milligrams of caffeine daily in the U.S. This is equivalent to 12 ounces of coffee, which is the most common source of caffeine for adults.

The amount of caffeine in brewed coffee “can vary greatly depending on the type of bean, the amount of grind, the size of the particles, the brew time and other factors pertaining to the source,” said Dr. Kilgore. “And then, of course, tea and soft drinks tend to have less caffeine.”

“The Food and Drug Administration [FDA] considers less than 400 milligrams of caffeine per day as safe,” said Dr. Fernandes, which “is about two to three 12-ounce cups of coffee a day.”

“Of course, if you're getting jittery, it's too much caffeine,” said Dr. Clark.

Additionally, “per the American Academy of Pediatrics, in general, young kids should avoid caffeine,” said Dr. Fernandes.

Try small, frequent doses of caffeine

“One of the things that people don't realize is, if you think of it as a medicine, then the best way to use it is in small, frequent doses,” said Dr. Kilgore. “So, 20 milligrams to 100 milligrams at a time as opposed to the standard American mug of coffee.

“And then just getting it into your brain a small amount at a time,” she added, noting that “if you're home with the increase of telework and things like that it might be easy to just serve yourself a little bit at a time throughout the day.”

“Then, when you start to feel your mental performance lagging, take it a little bit more—up until 2 p.m.,” Dr. Kilgore said.

BP and heart rate can rise with caffeine

“With regards to heart health, blood pressure and heart rate can be raised by caffeine intake,” said Dr. Fernandes. “I ask patients not to drink caffeine about 60 minutes prior to their appointment, especially if I'm monitoring or treating them for high blood pressure.”

Caffeine “can also cause an increase in heart rate, as well as causing some extra heartbeats,” she said. “Not necessarily abnormal heart rhythms, but some extra heartbeats we call PVCs—or premature ventricular contractions—or they'll also cause a sensation of palpitations.”

Caffeine may help depression

“In low doses, caffeine may help with [depression](#),” said Dr. Clark. The reason is because caffeine “stimulates dopamine, which is a chemical in your brain that plays a role in pleasure motivation and learning.”

Low levels of dopamine can make you feel tired, moody and unmotivated, among other symptoms, she said. But “having more dopamine helps patients with depression by improving their mood.”

Dr. Fernandes cautioned, however, that even though “there is some data that shows caffeine helps with mood,” clinical depression requires evidence-based medication and therapy.

How caffeine is metabolized varies

“When you drink caffeine, it is rapidly absorbed in the stomach and then the gastrointestinal tract, and then it gets metabolized by some of the enzymes in the liver,” Dr. Fernandes said. “Then it causes some hormones—called neurotransmitters—within the nervous system to be more stimulated or excited.”

Dr. Devries noted that caffeine is typically absorbed “within 45 minutes and is metabolized in the liver at rates subject to significant genetic variability.”

Caffeine “is highly metabolized, with about 3% or less being excreted in the urine,” said Dr. Kilgore. “The half-life of the drug typically is around four to five hours, but it can range dramatically from as quickly as an hour and a half to as much as nine hours, depending on genetic factors and coadministration with other medications, including oral contraceptives, and smoking.

“Smokers have massively increased clearance, so they will keep it around for a shorter time,” she added, noting that “pregnancy gets greatly reduced metabolism, so women need to watch how much caffeine they’re drinking.”

Caffeine can interfere with medications

“It’s important to tell your doctor about your caffeine intake because it can interfere with medications,” said Dr. Fernandes. “For example, if a patient is taking another stimulant medication for [ADHD](#), the combination with caffeine can cause high heart rate, elevated blood pressure and heart palpitations.”

Some commonly used medications or supplements that can have diminished effects due to caffeine include iron supplements, thyroid medications, antidepressants and [Alzheimer's disease](#) medications.

Then, on the other end, caffeine may increase the absorption or effects of other medications such as acetaminophen, aspirin and a medication for [Parkinson's disease](#).

With insomnia, limit caffeine

"Fortunately, typical intake of caffeine within the range of most coffee and tea drinkers has minimal risk, apart from perhaps difficulty sleeping for some," Dr. Devries said.

"The obvious side effect is that it can cause [insomnia](#) because it is intentionally trying to keep someone awake," said Dr. Kilgore. "In people who don't regularly drink caffeine, they're the most vulnerable to the insomnia component."

"Especially if it's consumed later in the day, like late afternoon, it can lead to insomnia and sleeping issues," said Dr. Fernandes. "Some people who use it more chronically might not be as sensitive to those effects, but we tell people to avoid using it later in the afternoon. Try to stick with it earlier in the day if you're going to drink it."

Coffee and tea have health benefits

"Coffee and tea are true feel-good stories in [nutrition](#)—we like them, and they like us back," said Dr. Devries. "Both coffee and tea are linked to a host of health benefits, including reduced risk of cardiovascular disease, lower risk of type 2 diabetes and improved longevity.

"Most of the benefits are noted with intake in the range of 2–5 cups per day," he added, noting "the source of the benefits, beyond caffeine, are a wide range of biologically active polyphenols—chemicals with powerful antioxidant and anti-inflammatory properties."

“Caffeine can actually be used as part of medications such as Excedrin [aspirin/paracetamol/caffeine], which is used often to relieve headaches or migraines,” Dr. Fernandes said, noting that “what’s interesting is that too much caffeine or withdrawal from caffeine can also cause headaches.”

Caffeine can help with exercise

“It actually can help exercise as well,” said Dr. Kilgore. “It’s shown to improve endurance and speed as well as just having a decreased perception of fatigue.”

By using caffeine in different forms, “people might be able to maintain exercise longer in a session,” she said, noting that “athletes often will take it intentionally before they exercise.”

This is because caffeine “is actually a part of some preworkouts to help with increasing motivation as well as helping with endurance,” Dr. Fernandes said. But when it comes to preworkout drinks, “be aware of the time that you’re taking it because it does have caffeine in it, so if you’re taking it right before you’re about to go to bed, it’s going to have some effects on your sleep.”

“Try to be conscious of timing and try to use preworkouts earlier in the day,” she said. “And the most important thing is caffeine is a drug, so you can develop tolerance to it—and you can also develop withdrawal from it.”

Caffeine may make some people feel anxious

“There are concerns about increasing [anxiety](#) for some people,” said Dr. Clark. This is “because caffeine is a stimulant and it stimulates some of the chemicals in your brain, speeding everything up.”

“Even in moderate amounts it can cause jitteriness and anxiety,” said Dr. Kilgore, noting that caffeine “can also increase respiratory rate, heart rate and blood pressure, which is most often fine in normal people, but if they have a health condition it should be under consideration.”

Brewing method affects cholesterol

“Interestingly, brewing method does matter,” said Dr. Devries, noting that “unfiltered coffee made with a French press or Turkish style and, to a lesser extent, espresso, are associated with a small but significant increase in [LDL cholesterol](#) that does not occur with filtered coffee.

“The reason is that filtered coffee removes much of the cafestol, a compound naturally found in coffee that raises blood cholesterol levels,” he added.

There can be caffeine withdrawals

“The most common concern about coffee is that it has a withdrawal syndrome,” said Dr. Kilgore. When this occurs, “people feel like they need to keep using it, even if they don’t need it that particular day for its intended benefit of increasing alertness; and that withdrawal effect can happen as soon as 12 hours after the last coffee in people who use it regularly.

“It can last up to one to two days if intentionally stopped after prolonged use,” she added, noting that “some effects can last even up to nine or 10 days with headache, nervousness and fatigue.”

Too much caffeine may lead to headaches

“If you consume too much caffeine, it can also cause headaches,” said Dr. Clark. This is often in addition to feeling “nervous and anxious.”

But caffeine can also “sometimes help headaches,” she said, noting that “for some people, it can actually treat their headaches or [migraines](#).”

“Caffeine can also be used medically to treat headache because it improves the absorption of other analgesics,” said Dr. Kilgore. “It actually causes vasoconstriction. That by itself can also make the headache go away. So, it can cause headaches, and it can also help.”

Weight gain may be decreased with caffeine

“Caffeine can actually decrease weight gain—not necessarily cause weight loss,” said Dr. Kilgore. “It increases your base metabolic rate and can suppress appetite a bit, which is useful if someone's thinking of trying to be careful about their weight.”

“The important thing, of course, is that in the United States so much of our coffee has all this added cream and sugar, which adds to weight gain,” she said. “So that really only pertains to black coffee, which has two calories a cup.

“Because it can make you feel less hungry and reduce cravings, but then for people who always have sugar in their coffee it probably increases cravings because of the sugar,” Dr. Kilgore added.

Decaf is not free of caffeine

“Decaffeinated coffee has only slightly lower levels of polyphenols than regular coffee,” Dr. Devries said. “Because of the preservation of high polyphenol levels, the association of decaffeinated coffee intake with improved longevity remains.”

It is important to point out that “decaffeinated coffee isn’t zero caffeine, but certainly much less,” said Dr. Kilgore. “A lot of people think it's without caffeine, but it's not. It's about 2 to 15 milligrams, so certainly far less than caffeinated.

“But even if you went to decaf, you would probably have some withdrawal symptoms if you don’t withdraw judiciously,” she added.

With caffeine, avoid drinking energy drinks

“The more serious risks of caffeine are mostly related to heavy consumption from use in energy drinks and in supplement form,” said Dr. Devries. “Anxiety and unsafe behaviors—especially in adolescents—are associated with energy drink use.

“High blood pressure, palpitations and arrhythmias are other possible risks with high intake of supplemental caffeine,” he added.

“In general, I do try to counsel my patients to avoid energy drinks or caffeine energy supplements as much as possible because you see more side effects when people use them,” Dr. Fernandes said. “If you’re going to use them, definitely let your doctor know because some of the symptoms that you might be seeing us for might be related to it.”

Don’t cut caffeine right away

If you are thinking of quitting caffeine, “it’s important to know how much you’re drinking in the first place, so really be honest with yourself about how much you’re drinking and keep track of it for a few days,” said Dr. Kilgore. “This will allow you to get a true sense of how much caffeine you’re consuming.”

“If you consume a lot of caffeine regularly and then you abruptly stop without gradually tapering off of it, you can definitely develop headaches,” said Dr. Fernandes.

But if you need to reduce the amount of caffeine you are consuming, “slowly decrease your intake,” said Dr. Clark. This means you can “do half caffeinated or you can mix in some decaffeinated beverages in sodas and coffee.”

“Don’t cut out caffeine completely all of a sudden because then you may experience some bad withdrawal syndromes,” she said. “If you need help with how to decrease your intake or you’re getting headaches when you’re trying to go off caffeine, talk to your doctor.”

Decrease caffeine intake if pregnant

For people who are pregnant, “you should decrease your intake of caffeine,” said Dr. Clark. This is because “the caffeine does go to the baby and can speed up the baby’s heart rate.”

Additionally, “the baby can become dependent on caffeine and have withdrawals when the baby is born,” she said. That’s why “you should dramatically limit your caffeine intake when pregnant.”

The American College of Obstetrics and Gynecology recommends that those who are pregnant [limit caffeine intake](#) to less than 200 milligrams per day.

Talk with your doctor about caffeine

“If you do have questions about caffeine, definitely chat with your doctor about it,” Dr. Fernandes said, “especially if you’re worried that you might be consuming too much, if you’re nervous about some of the side effects, or if you have questions about energy drinks.”

“I see a lot of patients with side effects from energy drinks,” she added. “So, if you’re concerned at all about caffeine, definitely have a conversation with your doctor about it.”